

Title (en)

Plating bath and method for electroplating tin-zinc alloys

Title (de)

Plattierungsbad und Verfahren zur Plattierung von Zinn-Zink Legierungen

Title (fr)

Bain de placage et methode d'électroplacage d'alliages étain-zinc

Publication

**EP 1201789 A2 20020502 (EN)**

Application

**EP 01124311 A 20011019**

Priority

US 69198500 A 20001019

Abstract (en)

The present invention relates to an aqueous plating bath for electrodeposition of tin-zinc alloys comprising at least one bath-soluble stannous salt, at least one bath soluble zinc salt, and a quaternary ammonium polymer selected from a ureylene quaternary ammonium polymer, an iminoureylene quaternary ammonium polymer or a thioureylene quaternary ammonium polymer. The plating baths also may contain one or more of the following additives: hydroxy polycarboxylic acids or salts thereof such as citric acid; ammonium salts; conducting salts; aromatic carbonyl-containing compounds; polymers of aliphatic amines such as a poly(alkyleneimine); and hydroxyalkyl substituted diamines as metal complexing agents. The plating baths of this invention deposit a bright and level deposit, and they can be adapted to provide plated alloys having high tin concentration over a wide current density range.

IPC 1-7

**C25D 3/60**

IPC 8 full level

**C25D 3/60** (2006.01)

CPC (source: EP US)

**C25D 3/60** (2013.01 - EP US)

Cited by

EP2175048A1; CN103992235A; CN104894630A; EP2698449A1; CN103757672A; CN104562090A; CN105063690A; EP2292679A1; CN102482417A; US9273407B2; US9322107B2; WO2014026806A3; WO2011029781A1; TWI486490B

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

**EP 1201789 A2 20020502; EP 1201789 A3 20020508; EP 1201789 B1 20060607; EP 1201789 B9 20061115**; AT E329069 T1 20060615; CA 2359444 A1 20020419; CA 2359444 C 20100629; DE 60120322 D1 20060720; DE 60120322 T2 20070606; ES 2263539 T3 20061216; US 6436269 B1 20020820

DOCDB simple family (application)

**EP 01124311 A 20011019**; AT 01124311 T 20011019; CA 2359444 A 20011017; DE 60120322 T 20011019; ES 01124311 T 20011019; US 69198500 A 20001019